

**Features**

- Up to 4 Data Lines and one Power Line Protects
- Ultra Low Leakage
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

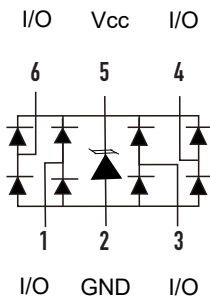
**Maximum Ratings**

IEC61000-4-2 (ESD)	Air	±20KV
	Contact	±15KV
Peak Pulse Current (8/20µs) VCC pin to ground	I <sub>PP</sub>	11A
Peak Pulse Power (8/20µs) <sup>(Note2)</sup> VCC pin to ground	P <sub>PK</sub>	100W
Peak Pulse Current (8/20µs) any I/O pin to ground	I <sub>PP</sub>	5A
Peak Pulse Power (8/20µs) <sup>(Note2)</sup> any I/O pin to ground	P <sub>PK</sub>	50W
Operating Junction Temperature Range	T <sub>J</sub>	-55°C to +125°C
Storage Temperature Range	T <sub>STG</sub>	-55°C to +150°C

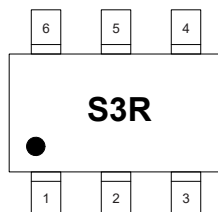
Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC61000-4-5.

**Internal Structure**

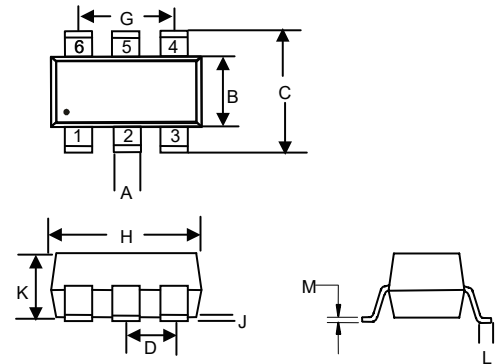


**Marking Code**



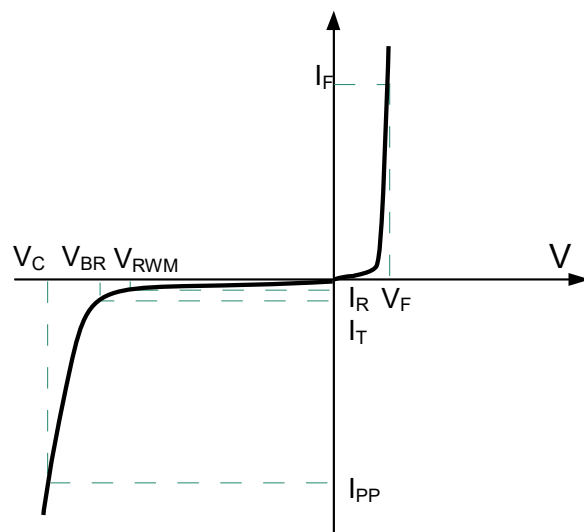
**ESD Protection Device**

**SOT23-6L**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.012	0.020	0.30	0.50	
B	0.051	0.070	1.30	1.80	
C	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
H	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	

Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PK}$	Peak Pulse Power
$C_J$	Junction Capacitance
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	3.6		7	V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V$			0.5	$\mu A$
Forward Voltage	$V_F$	$I_F=15mA, GND$ to Pin5			1.2	V
Clamping Voltage <sup>Note1</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$ any I/O pin to GND			8	V
Clamping Voltage <sup>Note1</sup>	$V_C$	$I_{PP}=5A, t_p=8/20\mu s$ any I/O pin to GND		9	11	V
Clamping Voltage <sup>Note1</sup>	$V_C$	$I_{PP}=11A, t_p=8/20\mu s$ VCC pin to GND		8	11	V
Junction Capacitance	$C_J$	$V_{pin5}=5V, I/O=0V, f=1MHz$ any I/O pin to GND		0.6	0.9	pF
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$ VCC pin to GND		0.3	0.45	pF

Note :

1. Non-repetitive current pulse 8/20 $\mu s$  exponential decay waveform according to IEC61000-4-5.

**Curve Characteristics**

Fig. 1 - 8 X 20µs Pulse Waveform

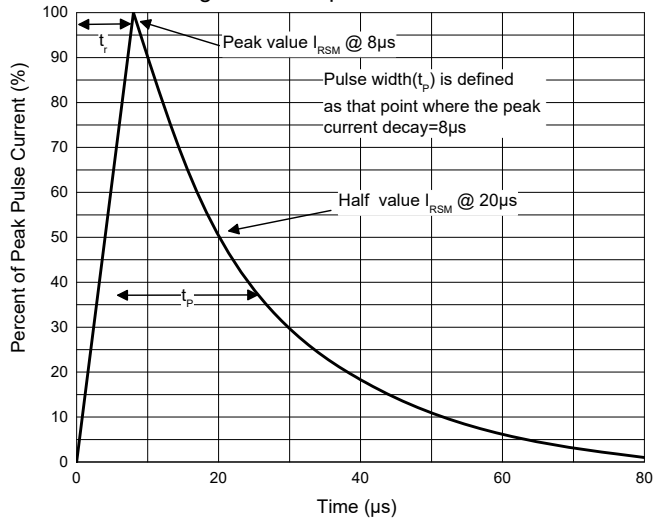


Fig. 2 - Non-Repetitive Peak Pulse Power

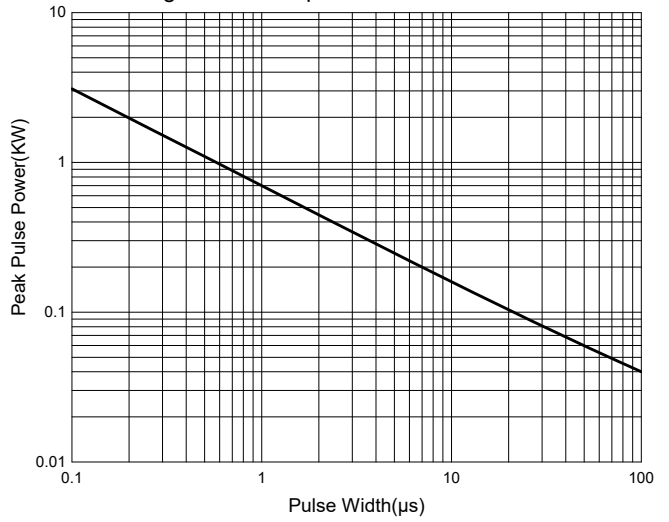


Fig. 3 - Capacitance Characteristics

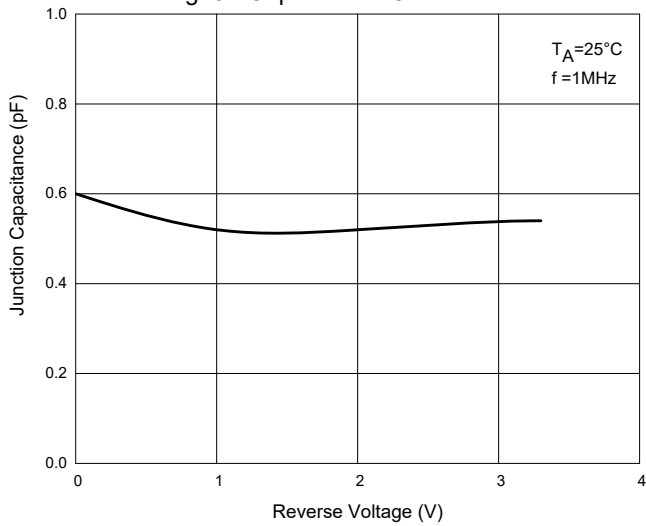


Fig. 4 - Clamping Voltage Characteristics

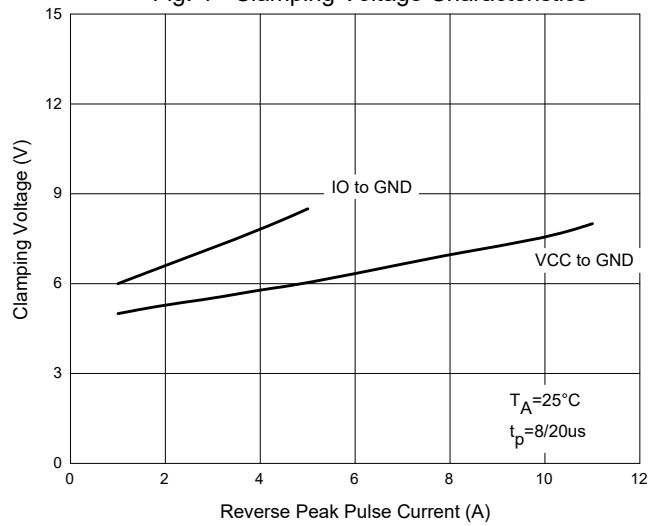


Fig. 5 - TLP Curve

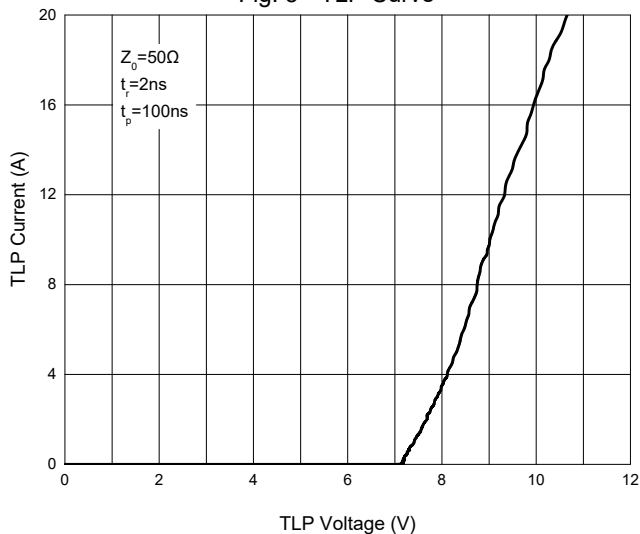
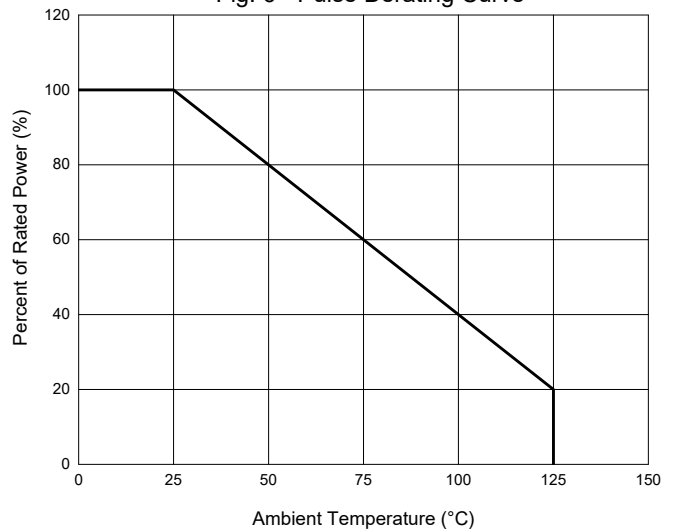


Fig. 6 - Pulse Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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